

13000 GeV pp

Z (Drell-Yan)

 $\langle p_T \rangle$ (ATLAS UE in Z production) $1/N_{\text{ch}} dN_{\text{ch}}/dp_T$ [GeV]

- ATLAS
- ▲ Pythia 8.183 default
- ◻ Pythia 8.183 tune-4cx

Rivet 3.1.10, $\geq 300\text{k}$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS 2019 I1736531

Ratio to ATLAS

2

1

0.5

 p_T [GeV]